

ABSTRACT

The present disclosure is directed to an apparatus and method for producing and comparing signals from various points in a MEMS device. By producing signals which should be of substantial identical characteristics, deviations from the situation where the signals are of identical characteristics can be used to identify various types of asymmetry which are otherwise difficult to detect. In one embodiment, the MEMS device is comprised of a plurality of fixed beams arranged symmetrically and a plurality of movable beams arranged symmetrically. A first sensor is formed by certain of the fixed and movable beams while a second sensor, electrically isolated from said first sensor, is formed by at least certain other of the fixed and movable beams. The first and second sensors are located within the MEMS device so as to produce signals of substantially identical characteristics. A circuit is responsive to the first and second sensors for comparing the signals produced by the first and second sensors. In addition to the apparatus, methods of performing a self test are also disclosed, which may be performed in real time.